

REMARKS

Claims 1-77 and 80 are pending in this application. Claims 1, 34, 41, 48, 55, 62 and 77 are amended for clarity by adding the phrase "**allowing formation of a gradient of antioxidant in the consolidated polymeric material**". The amendment is fully supported by the specification as described below. Therefore, no new matter has been introduced. The Office Action is discussed below:

Indefiniteness Rejection:

On page 2 of the Office Action, the examiner has rejected claims 1-77 and 80 allegedly as being indefinite and asserted that, in the claims 1, 34, 41, 48, 55, 62 and 77, it is not clear whether the "oxidation and wear resistant medical implant" in the preamble is the same or different than the "oxidation and wear resistant medical implant" limitation on the last line of each of claims 1, 34, 41, 48, 55, 62 and 77. In response, applicants clarify that the "oxidation and wear resistant medical implant" recited on the last line of each of the claims refers to the medical implant made according to the claimed method. For additional clarity, applicants amend claims 1, 34, 41, 48, 55, 62 and 77 by introducing the article "the" on the last line of each of the claims.

Obviousness Rejection:


On pages 3-8 of the Office Action, the examiner has maintained the obviousness rejections of the claims allegedly as being unpatentable over Lidgren *et al.* (US 6,448,315) in view of Hahn (US 5,827,904) and further in view of Parth *et al.* (2002), and/or Burstein *et al.* (US 6,629,198), and/or Ylanen *et al.* (US 6,517,857). In response to the arguments filed on April 21, 2006, on page 8-9 of the Office Action, the examiner alleges that "the features upon which applicant relies are not recited in the claims(s)", for example, the methodologies that allow for a gradient of antioxidant in the consolidated material are not recited in the claims. Without acquiescing in the rejection, in order to expedite the prosecution, applicants amend the independent claims 1, 34, 41, 48, 55, 62 and 77 to recite the claimed methods allow "formation of a gradient of antioxidant in the consolidated polymeric material." The amendment is fully supported by the specification, see for example, page 18, lines 12-25.

Applicants reiterate that the claimed methodologies provide several new and unexpected advantages not provided by prior art approaches. First, by avoidance of melting of the polymer, crystallinity of the cross-linked polymer is preserved, which in turn preserves mechanical properties and fatigue resistance. See specification at page 1, line 24 to page 2, line 2. Applicants' methodologies also allow for a gradient of antioxidant in the consolidated material while minimizing thermal degradation of the antioxidant. See specification at page 18, lines 12-25. These advantages are only provided by applicants' methodologies, and cannot be achieved via melting of cross-linked polymer (prior art) or doping of unconsolidated polymer, such as a powder or flake (prior art). For example, Lidgren requires mixing of UHMWPE powder/particles with an antioxidant prior to consolidation in order to obtain a homogeneous distribution of the antioxidant (see, for example, col. 4, lines 46-47; col. 6, lines 1-3). Therefore, Lidgren process does not allow formation of a gradient of antioxidant in the consolidated polymeric material. Applicants also reiterate that other cited references do not rectify the deficiencies of Lidgren in order to arrive at the claimed invention. Accordingly, MPEP § 716.02 compels withdrawal of the alleged obviousness rejections.

REQUEST

Applicant submits that the claims 1-77 and 80 are in condition for allowance and request consideration to that effect. The examiner is invited to contact the undersigned at (202) 416-6800 should there be any questions.

Respectfully submitted,



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Date

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